

## ABSTRACT

A packet communication network is connected between a first external network and a second external network. The packet communication network includes a classifier, a parallel network that includes a plurality of physically or logically independent networks, and a multiplexing router. The classifier classifies a packet input from the first external network to one of the networks in the parallel network. Each of the networks in the parallel network transmits the packet to the multiplexing router. The multiplexing router multiplexes a packet received from the networks in the parallel network and outputs the multiplexed packet to the second external network.